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(54) **Rounded end cigarette box.**

(57) A rounded end cigarette box (10) having a hinged top is provided. The box has an inner sleeve member (12) nested inside an outer sleeve member (11). The outer sleeve member has a cover (13) formed therein and inner (14,16) and outer (15,17) top and bottom end flaps connected thereto. The inner and outer end flaps are used to close the top and bottom portion of the rounded end cigarette box. The cover opens and closes by the use of a flexural hinge. Preferably, the inner sleeve, outer sleeve and end flaps are all formed from a one-piece blank.

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Background of the Invention

This invention relates to cigarette packs, and particularly to a rounded end (cross-section) hinged top box for cigarettes.

Cigarettes are typically sold in packs of ten to twenty-five cigarettes. Two types of packs are in general use. The first type is a soft pack which is a bundle of cigarettes wrapped in foil, overwrapped with a paper which usually has brand and other information printed on its outer side, and overwrapped again with a sealed polypropylene layer. The second type is a box which is a hard, paperboard box containing a foil wrapped cigarette bundle and having a hinged lid at the top. Typically, a paperboard insert surrounds the bundle at least near the top of the box providing a frictional engagement surface to retain the lid in the closed position when desired. A cutout in this insert allows a smoker to remove cigarettes from the box. This second type of pack is also overwrapped with a sealed polypropylene layer.

Each type of pack has its own advantages and disadvantages. The soft pack has soft corners, and collapses as cigarettes are removed from it, taking up less space in a smoker's pocket or purse as the contents are smoked, while providing an approximate external indication of the number of cigarettes remaining in the pack. However, once the polypropylene wrapper of a soft pack is opened, it cannot be resealed. As a result, cigarettes or any loose tobacco in the pack may eventually drop from the pack into the smoker's pocket or purse. The cigarettes can also be damaged if the pack is roughly handled. For these reasons, many smokers prefer a rigid hinged top box, which can be reclosed to prevent loose tobacco from dropping out, and which offers better protection for the cigarettes within it.

The typical hinged top cigarette box has square, pointed corners. This may increase the wear on accessories (e.g., handbags) or articles of clothing (e.g., shirt pockets) in which the box is carried. Many consumers prefer the "softer" feel of containers having curved or rounded edges.

United States Patent 4,923,059 discloses one such hinged top cigarette box having curved edges. However, in order to provide its curved shape, curved end plugs were used to close off the top and bottom of the cigarette box. End plugs may detract from the overall "softness" of the cigarette box and may also add unnecessary weight and cost to the cigarette box. Furthermore, the paperboard body and end plugs of the cigarette box had to be cut separately and then assembled to form the box, thus increasing the cost and complexity of manufacturing the box.

Where a cigarette box having curved edges and end flaps has been provided, the end flaps have not nested properly with respect to each other and within the top and bottom edges of the box.

Summary of the Invention

It has been desired to provide a lightweight cigarette pack having rounded ends and a hinged top.

It has also been desired to provide a cigarette pack that may be formed from a single blank.

It has also been desired to provide a cigarette pack having a flat oval profile.

It has also been desired to provide a cigarette pack that does not have separate end plugs.

It has also been desired to provide a cigarette box having inner and outer end flaps on both ends that lie flush against each other and within the upper and lower edges of the box.

It has also been desired to provide a cigarette pack of increased attractiveness to smokers.

In accordance with the invention, a rounded end hinged top box is provided having an inner sleeve member nested inside an outer sleeve member and having a cover member that opens and closes to allow access to the cigarettes. Inner and outer end flaps are provided on both ends of the rounded end box thus formed. Each inner end flap is slightly smaller than the respective outer end flap. Each inner end flap also seats approximately 0.3mm (0.012 inch) lower inside the body of the cigarette box than the respective outer end flap when the cigarette box is formed. The inner and outer end flaps help the rounded end cigarette box retain the proper cross-sectional shape and also prevent cigarettes or loose tobacco from falling out of the rounded end cigarette box.

Preferably the inner sleeve member, the outer sleeve member, the cover member and the end flaps are formed from the same blank. The inner sleeve member has a height substantially equal to the length of a cigarette, a width approximately equal to an integral multiple of the diameter of a cigarette and a depth sufficient to accommodate a plurality of rows of cigarettes. A cutout through which cigarettes may be withdrawn is provided in the top and forward portion of the inner sleeve member. The outer sleeve member is cut substantially across its width near the top thereof and is scored from both ends of the cut to the ends of the outer sleeve member. This configuration provides a cover member at the top of and hingedly connected to the outer sleeve member. The outer sleeve member is positioned so the cover member reveals the cutout portion of the inner sleeve member when the cover member is swung away from the inner sleeve member. This allows easy access to the cigarettes stored in the rounded end cigarette box.

The outer sleeve member also has a back panel section that is recessed approximately 0.3mm (0.012 inch) toward the center of the blank at its upper and lower edges. This recess allows for the top and bottom outer end flaps to be placed flushly against both the upper and lower edges of the rounded end box thus formed, as well as against the respective inner

end flaps. This arrangement helps register the flat oval shape so as to assure proper forming of the rounded end cigarette box of the present invention. The height of the outer sleeve member with the cover-member formed therein is preferably greater than the length of a cigarette. Inner and outer end flaps are used to cover both ends of the rounded end cigarette box thus formed. The end flaps help the rounded end cigarette box retain the proper cross-sectional shape.

Alternatively, the rounded end cigarette box may be formed from separate blanks. For example, three blanks may be used, one for the inner sleeve member, one for both the outer sleeve member and bottom inner and outer end flaps, and one for both the cover member and top inner and outer end flaps. In this embodiment, the cover member is preferably adhered to a flexible tab at the top and rear portion of the inner sleeve member.

The rounded end cigarette box may also be formed from two blanks. One for the inner sleeve member and a combined blank for the outer sleeve member, cover member and top and bottom end flaps.

In all of these embodiments, the rounded end cigarette box may have any cross-sectional shape such as a polygon or a circle or an oval. An arcuate cross-section avoids the hard square edges of typical hinged top cigarette boxes and presents a more pleasing appearance to the smoker. The cross-sectional shape of the rounded end cigarette box is limited only by the shape of the mandrel that is used for folding the laminate blank into the desired shape.

Brief Description of the Drawings

The invention will be further described, by way of example, with reference to the drawings, which like reference characters refer to like parts throughout, and in which:

FIG. 1 is a perspective view of the preferred embodiment of the rounded end cigarette box of the invention in the closed position;

FIG. 2 is a perspective view of the preferred embodiment of the rounded end cigarette box of the invention in the open position;

FIG. 3 is a side elevational view of the preferred embodiment of the rounded end cigarette box of the invention in the open position;

FIG. 4 is a plan view of the one piece blank for the rounded end cigarette box of the invention;

FIG. 5 is an enlarged fragmentary view of the encircled area "A" in Figure 4;

FIG. 6 is an enlarged fragmentary view of the encircled area "B" in Figure 4;

FIG. 7 is a vertical cross-sectional view taken generally along the line 7-7 of Figure 1;

FIG. 8 is a plan view of a blank for the inner sleeve member for the rounded end cigarette box of the invention;

FIG. 9 is a plan view of a blank for both the cover member and top inner and outer end flaps of the rounded end cigarette box of the present invention; and

FIG. 10 is a plan view of a blank for the outer sleeve member and bottom inner and outer end flaps of the rounded end cigarette box of the invention.

Detailed Description of the Invention

A preferred embodiment of the rounded end cigarette box of the present invention is shown in FIGS. 1-3. In the preferred embodiment, the rounded end cigarette box 10 has a flat oval cross-section. This configuration avoids the hard square edges of typical hinged top cigarette boxes. Rounded end cigarette box 10 includes an outer sleeve member 11, an inner sleeve member 12 and a cover member 13. Inner sleeve member 12 is nested inside outer sleeve member 11 and has a cutout 20 to facilitate the removal of cigarettes from rounded end cigarette box 10. Preferably, inner sleeve member 12 has a height substantially equal to the length of a cigarette. The combined height of outer sleeve member 11 and cover member 13 is preferably greater than the length of a cigarette. Cover member 13 is hingedly connected to outer sleeve member 11 to allow access to the cigarettes stored in, and to close rounded end cigarette box 10.

End flaps 14 and 15 are folded inward and may be adhered to each other by glue or other suitable adhesive to form the bottom of rounded end cigarette box 10. Likewise, end flaps 16 and 17 are folded inward and may be adhered to each other in a similar manner to form the top of rounded end cigarette box 10. When glued in place, end flaps 14, 15, 16 and 17 prevent loose tobacco or cigarettes from falling out of rounded end cigarette box 10 and also hold the shape of the box. Perforations may be placed in end flaps 14 and 15 to eliminate the hydraulic effect caused by loading a plurality of cigarettes into rounded end cigarette box 10, i.e., the holes minimize the back pressure that may result if the cigarettes are loaded into rounded end cigarette Rox 10 too quickly. The perforations also act as a means by which the rounded end cigarette box may be oriented properly for insertion of the cigarettes.

In an alternative embodiment, as shown in FIG. 7, end flaps 14 and 15 are combined with member 21, which fits in the bottom of outer sleeve member 11, thereby defining a space between inner end flap 14 and member 21. This space may be filled with material that transfers moisture, flavor or odor to the cigarettes stored in rounded end cigarette box 10. Member 21 may be perforated. The perforations allow fluid transfer between the space formed between end flap 14 and member 21 and the cigarettes stored in round-

ed end cigarette box 10. A permeable membrane 23 may be placed over the perforations in member 21 to control the fluid transfer between the cigarettes and the material placed in the space formed between end flap 14 and member 21. The invention described in United States Patent 5,037,459 describes a device for controlling the relative humidity in a substantially sealed container such as a pack of cigarettes that is suitable for use as described above.

A preferred embodiment of the blank used to form rounded end cigarette box 10 is shown in FIG. 4. Inner end flaps 14 and 16 are smaller than the respective outer end flaps 15 and 17. In addition, score lines 115 and 117 for defining where each inner flap is folded are recessed approximately 0.3mm (0.012 inch) toward the center of the blank with respect to the upper and lower edges of the blank. When the blank is folded to form rounded end cigarette box 10, the recesses allow the inner end flaps to lie flush against the outer end flaps andwithin the upper and lower edges of the rounded end cigarette box thus formed.

Preferably, outer sleeve member 11, inner sleeve member 12, cover member 13, and end flaps 14, 15, 16 and 17 are all formed from the same blank 100, as shown in Figure 4. Preferably, the blank is a paperboard blank. Blank 100 is formed over a mandrel and may have as many plies as desired. Blanks from which the rounded end cigarette box of this invention may be made are typically standard paperboard used for conventional cigarette boxes (solid bleach sulfate having a clay coating).

Inner sleeve member 12 of blank 100 is defined by edge 103 and line 112. As shown in FIG. 4, inner sleeve member 12 has a height that is less than the combined height of cover member 13 and outer sleeve member 11. Preferably inner sleeve member 12 is ribbed to weaken the blank which facilitates folding thereof. Outer sleeve member 11 is defined by edge 104 and line 112. Outer sleeve member 11 may be ribbed or otherwise decorated or labeled with brand or other information on the side that will be exposed to the smoker. As shown in FIGS. 4 and 5, back panel section 18 is recessed approximately 0.3mm (0.012 inch) at its top and bottom edges, with respect to the upper and lower edges of the blank, to facilitate the folding of inner end flaps 14 and 16 over back panel section 18 to form rounded end cigarette box 10. Cut lines 105 and 106 and score lines 107 and 108 define cover member 13. Score line 107 is preferably also perforated to further weaken that line. Score lines 115 and 116 define the inner edges of top inner and outer end flaps 16 and 17, which are connected to cover member 13. Score lines 117 and 118 define the inner edges of bottom inner and outer end flaps 14 and 15, which are connected to outer sleeve member 11.

Preferably, inner end flaps 14 and 16 are smaller than outer end flaps 15 and 17. Score lines 115 and 117, for defining where inner end flaps 14 and 16 are folded, are recessed approximately 0.3mm (0.012 inch) toward the center of the blank with respect to the upper and lower edges of the blank as shown in FIGS. 4 and 6. When blank 100 is folded to form rounded end cigarette box 10, score lines 107 and 108 overlap to form the hinge about which cover member 13 rotates. Cut line 105 allows a hinging action for cover member 13. Preferably cut line 105 extends below score line 107 a short distance to facilitate the hinging action of cover member 13. This distance is preferably about one millimeter. Cut line 106 forms the opening through which access to the cigarettes is made available.

Rounded end cigarette box 10 is formed by folding blank 100 appropriately. Edge 103 is wrapped in either a clockwise direction or a counter clockwise direction until it abuts with line 112. Edge 104 is then wrapped over edge 103 until it abuts with line 113. Preferably edge 104 is wrapped over edge 103 in a direction counter to that in which edge 103 is wrapped. The direction of rotation of edge 103 depends on which side of outer sleeve member 11 of blank 100 is to be viewed by the smoker. That portion of blank 100 bounded by line 111 and edge 103 is adhered to that portion of blank 100 bounded by line 113 and line 112. The adherence may be achieved by any conventional means of joining layers of standard paperboard. For example, a hot melt or liquid adhesive may be used or the paperboard may be coated and joined to an adjacent paperboard by heat or ultra sonic vibrations. Edge 104 is preferably wrapped over edge 103 until it abuts with line 113 so that score lines 107 and 108 overlap. The portion of blank 100 bounded by edge 104 and line 114 is adhered to the portion of blank 100 bounded by line 112 and line 113. Also the portion of blank 100 bounded by lines 202 and 203 is preferably adhered to the portion of outer member 11 bounded by lines 200 and 201. Top and bottom inner end flaps 16 and 14 are folded inward along score lines 115 and 117, respectively. Top and bottom outer end flaps 17 and 15 are folded inward along score lines 116 and 118, respectively, and also folded over the respective inner end flaps 16 and 14. Adherence of inner end flaps 14 and 16 to outer end flaps 15 and 17, respectively, may be by any conventional means as described above. With rounded end cigarette box 10 thus formed, cover member 13 is hinged along the overlap of score lines 107 and 108. When cover member 13 is rotated away from inner sleeve member 12, cutout 20 is exposed allowing access to the cigarettes stored in rounded end cigarette box 10.

Rounded end cigarette box 10 may also be formed from separate blanks. For example, three blanks may be used. Blank 300 which is folded into inner sleeve member 12 may be formed by cutting blank 100 along line 112. Thus, blank 300 has the

shape shown in FIG. 8. Inner sleeve member 12 may be formed by folding edge 103' clockwise or counterclockwise until it abuts with line 112'. The portion of blank 300 bounded by edge 103' and line 111' may be adhered to the portion of blank 300 bounded by line 112'.

Blank 302 for outer sleeve member 11 and bottom inner and outer end flaps 14 and 15 may be formed by cutting blank 100 along lines 112, 105, 106, 107, and 108 to have the shape shown in FIG. 9. Outer sleeve member 11 may be formed by folding edge 150 clockwise or counterclockwise so that it abuts with line 114'. The direction that edge 150 is folded depends on which side of blank 302 is to be viewed by the smoker. The portion of blank 302 bounded by edge 150 and line 151 is adhered to that portion of laminate blank 302 bounded by edge 104' and line 114'.

Blank 301 for cover member 13 and top inner and outer end flaps 16 and 17 may be formed by cutting another blank 100 along lines 105, 106, 107, and 108 to have the shape shown in FIG. 10. Cover member 13 may be formed by folding edge 152 clockwise or counterclockwise so that it abuts with line 121. The direction that cover member 13 is folded depends on which side of blank 301 is to be viewed by the smoker. The tab portion 40 of blank 301 bounded by edge 152 and line 120 may be adhered to the tab portion 41 of blank 301 bounded by edge 140 and line 121. Overlapping tab portions 40 and 41 may be adhered to inner sleeve member 12 formed from blank 300. The area of inner sleeve member 12 bounded by lines 202' and 203' is preferably adhered to the area of outer sleeve member 11 bounded by lines 200' and 201'. As discussed previously, inner end flaps 14 and 16 are folded inward along score lines 115 and 117, respectively. Outer end flaps 15 and 17 are then folded along score lines 116 and 118, over inner end flaps 14 and 16, respectively, and adhered as described previously to form rounded end cigarette box 10.

Rounded end cigarette box 10 box may also be formed from two blanks. Blank 100 may be cut along line 112 to form one blank for cover member 13, outer sleeve member 11, top end flaps 16 and 17 and bottom end flaps 14 and 15. Another laminate blank 100 can then be cut along line 112 or 113 to form inner sleeve member 12. These two blanks can then be joined and folded as described above to form rounded end cigarette box 10.

The rounded end cigarette box described herein provides a hinged top box that may be formed from a single blank and has inner and outer end flaps on both ends. In addition, recesses in (1) the score lines that define where each inner end flap is folded and (2) a back panel section of the blank allow the inner end flaps to lie flush against the outer end flaps and within the upper and lower edges of the box. Finally, use of a single blank for forming the rounded end cigarette box reduces the cost and complexity of manufacturing the cigarette box.

Claims

1. A rounded end hinged top box (10) comprising:
an inner sleeve (12) formed from a blank (100) having a first panel and a second panel;
an outer sleeve (11) formed from the blank surrounding the inner sleeve;
a cover (13) formed from the blank and connected to the outer sleeve by a flexural hinge;
first (16) and second (17) top end flaps connected to the top edge of the blank;
first (14) and second (15) bottom end flaps connected to the bottom edge of the blank;
the first panel forming the inner sleeve defined by a first edge (103) of the blank and a short cut line (105) parallel to the first edge at an intermediate position along the width of the blank;
the second panel forming the outer sleeve, the cover and the end flaps defined by a second edge (104) of the blank, parallel to the first edge and the short cut line, the second panel having (a) a first short score line (107) at the end of the short cut line (105) perpendicular thereto and extending in a direction toward the second edge (104) of the blank and having a second short score line (108) in line with the first short score line (107) and extending from the second edge (104) toward the first short score line and a cut line (106) connecting the first and second short score lines, (b) first (115) and second (116) top score lines along the top edge for defining where the first (16) and second (17) end top flaps are located along the top edge fold; and (c) first (117) and second (118) bottom score lines along the bottom edge for defining where the first (14) and second (15) bottom end flaps are located along the bottom edge fold.

2. A rounded end hinged top box (10) comprising:
an inner sleeve (12) formed from a first blank;
an outer sleeve (11) formed from a second blank surrounding the inner sleeve;
a cover (13) formed from the second blank and connected to the outer sleeve by a flexural hinge;
first and second end flaps connected to the top edge of the second blank;
first and second end flaps connected to the bottom edge of the second blank;
the second blank defined by a first edge and a second edge, a first score line positioned adjacent to the first edge and extending in a direction toward the second edge, a second short

score line in line with the first short score line and extending from the second edge toward the first short score line and a cut line connecting the first short score line and said second short score line.

3. A rounded end hinged top box (10) comprising:
an inner sleeve (12) formed from a first blank (300) defined by a first edge (103') and a second edge and a short score line extending from the second edge to define a flexural hinge;
an outer sleeve (11) formed from a second blank (302) surrounding the inner sleeve;
a cover (13) formed from a third blank (301) and connected to the inner sleeve by the flexural hinge;
first (16) and second (17) end flaps connected to the top edge of the third blank; and
first (14) and second (15) end flaps connected to the bottom edge of the second blank.

4. A rounded end hinged top box (10) according to claim 1, 2 or 3 in which the blank (100) or at least one of the blanks (300,301,302) is of paperboard.

5. A rounded end hinged top box (10) according to any preceding claim in which the first end flaps (14,16) are smaller than the second end flaps (15,17).

6. A rounded end hinged top box (10) according to any preceding claim in which the first end flaps (14,16) fold inwardly of the second end flaps (15,17).

7. A rounded end hinged top box (10) according to claim 5 or 6 in which the score line (115,117) defining where each first end flap (14,16) is folded is recessed approximately 0.3mm (0.012 inch) toward the center of the blank (100)(301)(302) comprising the flap with respect to the edge of the blank carrying the flap.

8. A rounded end hinged top box (10) according to claim 7, in which a back panel section (18) (40) of the said blank (100)(301) (302) is recessed approximately 0.3mm (0.012 inch) toward the center of the blank with respect to the top and bottom edges of the blank carrying the flap.

9. A rounded end hinged top box (10) according to any preceding claim further comprising a plate (21) positioned above the first bottom end flap (14) defining a space therebetween.

10. A rounded end hinged top box (10) according to claim 9 in which the plate (21) is perforate.

11. A rounded end hinged top box (10) according to claim 9 in which the plate (21) is covered by a permeable membrane (23).

12. A rounded end hinged top box (10) according to any preceding claim in which the first (14) and second (16) bottom end flaps are perforate.

13. A blank (100) for forming a rounded end hinged top box (10) comprising: an inner sleeve (12); an outer sleeve (11) panel surrounding the inner sleeve: a cover (13) panel connected to the outer sleeve panel by a flexural hinge; first (16) and second (17) top end flaps connected to the top edge of the blank; and first (14) and second (15) bottom end flaps connected to the bottom edge of the blank;
the inner the blank (100) comprising a front panel providing the inner sleeve (12) defined by a first edge (103) of the blank and a short cut line (105) parallel to the first edge at an intermediate position along the width of the blank; and
the second panel providing the outer sleeve (11), the cover (13) and the end flaps (14,15,16,17) defined by a second edge (104) of the blank, parallel to the first edge and to the short cut line, the second panel having (a) first short score line (107) positioned at the end of the short cut line (105) perpendicular thereto and extending in a direction toward the second edge (104) of the blank and having a second short score line (108) in line with the first short score line and extending from the second edge toward the first short score line and a cut line (106) connecting the first and second short score lines; (b) first (115) and second (116) top score lines along the top edge defining the first (16) and second (17) top end flaps positioned along the top edge fold; and (c) first (117) and second (118) bottom score lines along the bottom edge defining where the first (14) and second (15) bottom flaps positioned along the bottom edge fold.

14. First and second blanks for forming a rounded end hinged top box (10) comprising: an inner sleeve (12) formed of the first blank;
an outer sleeve (11) formed of the second blank surrounding the inner sleeve;
a cover (13) formed from the second blank and connected to the outer sleeve by a flexural hinge;
first and second top end flaps connected to the top edge of the second blank;
first and second bottom end flaps connected to the bottom edge of the second blank;
the second blank being defined by a first edge and a second edge, a first score line positioned adjacent to the first edge and extending in

a direction toward the second edge, a second short score line in line with the first short score line and extending from the second edge toward the first short score line and a cut line connecting the first and second short score lines.

15. First (300), second (302) and third (301) blanks for forming a rounded end hinged top box (10) comprising: an inner sleeve (12) formed of the first blank (300);

defined by a first edge (103') and a second edge and a short score line extending from the second edge to define a flexural hinge;

an outer sleeve (11) formed of the second blank (302) surrounding the inner sleeve;

a cover (13) formed of the third blank (301) and connected to the inner sleeve by the flexural hinge;

first (16) and second (17) top end flaps connected to the top edge of the third blank; and

first (14) and second (15) bottom end flaps connected to the bottom edge of the second blank.

16. A bland (100)(300)(301)(302) according to any of claims 13 to 15 of paperboard.

17. A blank according to any of claims 13 to 16, in which the first end flaps (14)(16) are smaller than the second end flaps (15)(17).

18. A blank (100)(301,302) according to any of claims 13 to 17 in which the first end flaps (14)(16) fold inwardly of the second end flaps (15)(17).

19. A blank (100)(301,302) according to claim 18 in which a score line (115)(117) defining each first end flap (14)(16) is folded is recessed approximately 0.3mm (0.012 inch) toward the center of the blank with respect to the top and bottom edges of blank.

20. A blank (100)(301,302) of claim 13, wherein a back panel section of the blank is recessed approximately 3mm (0.012 inch) toward the center of the blank with respect to the top and bottom edges of the blank.

21. A rounded end hinged top box (10) comprising:

an inner sleeve (12) surrounded by an outer sleeve (11);

a cover (13) connected along its bottom, edge to the inner or outer sleeve along a flexural hinge;

inner (16) and outer (17) top end panels attached to the top edge of the cover; and

inner (14) and outer (15) bottom end panels attached to the bottom edge of the outer sleeve.

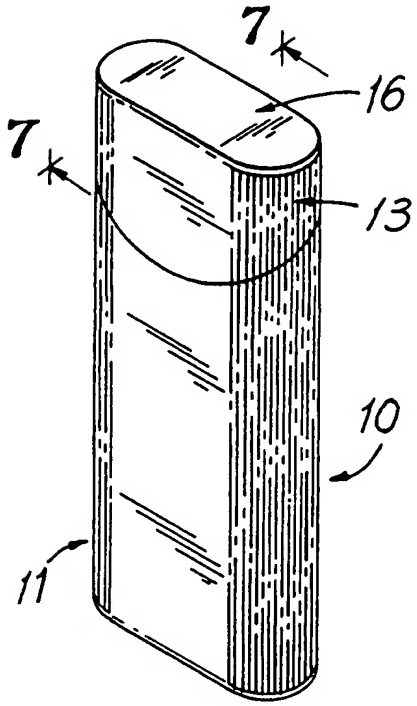

FIG. 1

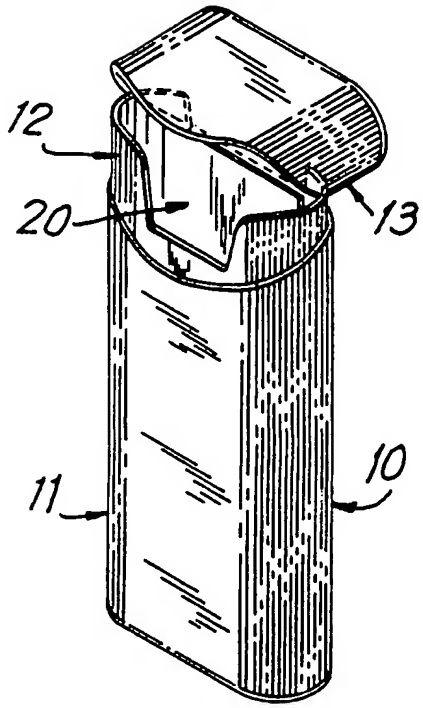

FIG. 2

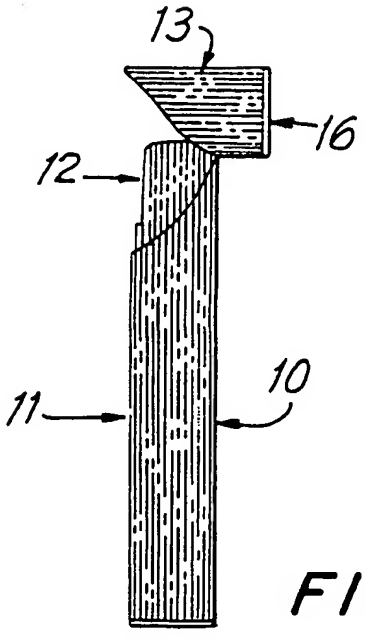

FIG. 3

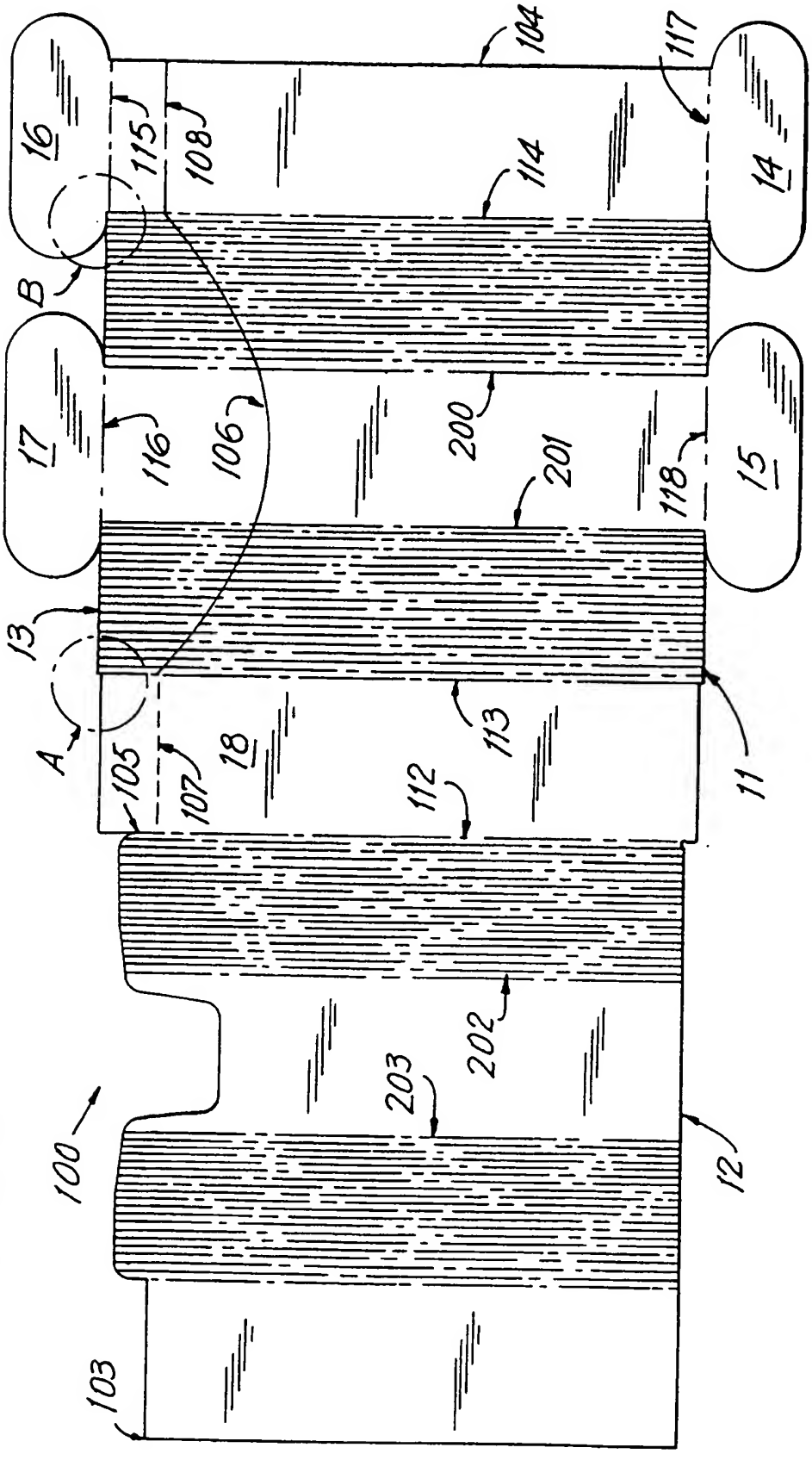
104
117
16
115
108
14
114
B
17
116
106
200
201
118
15
13
A
105
107
18
112
113
11
100
202
203
12
103

FIG. 4

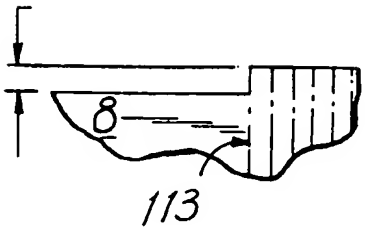

FIG. 5

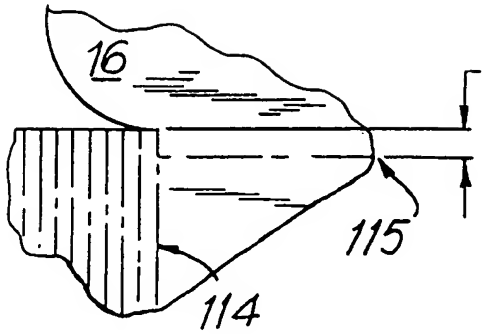

FIG. 6

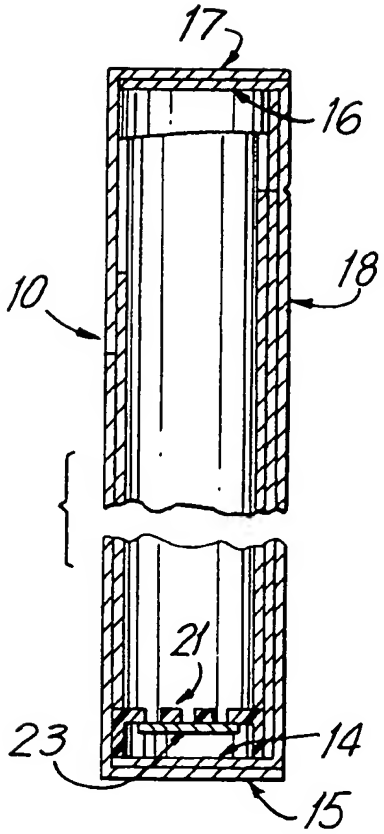

FIG. 7

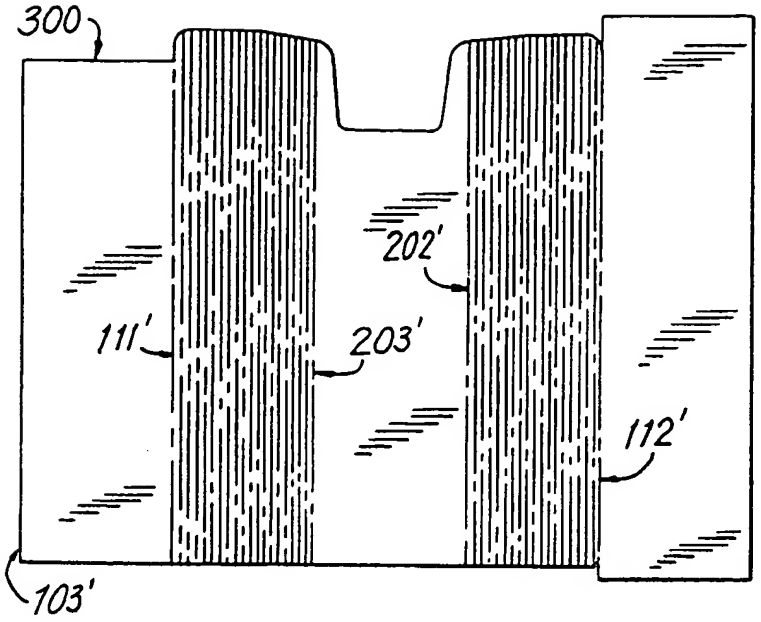

FIG. 8

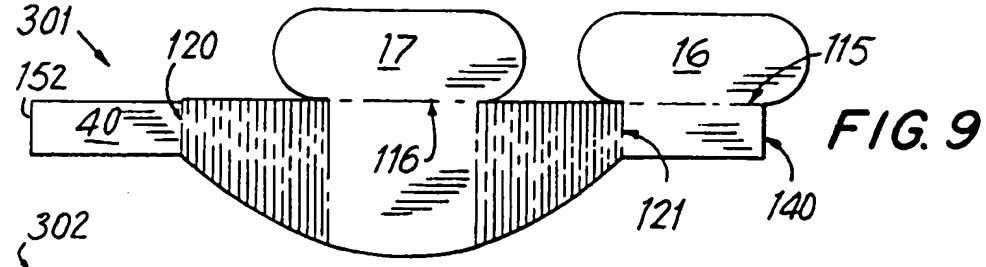

FIG. 9

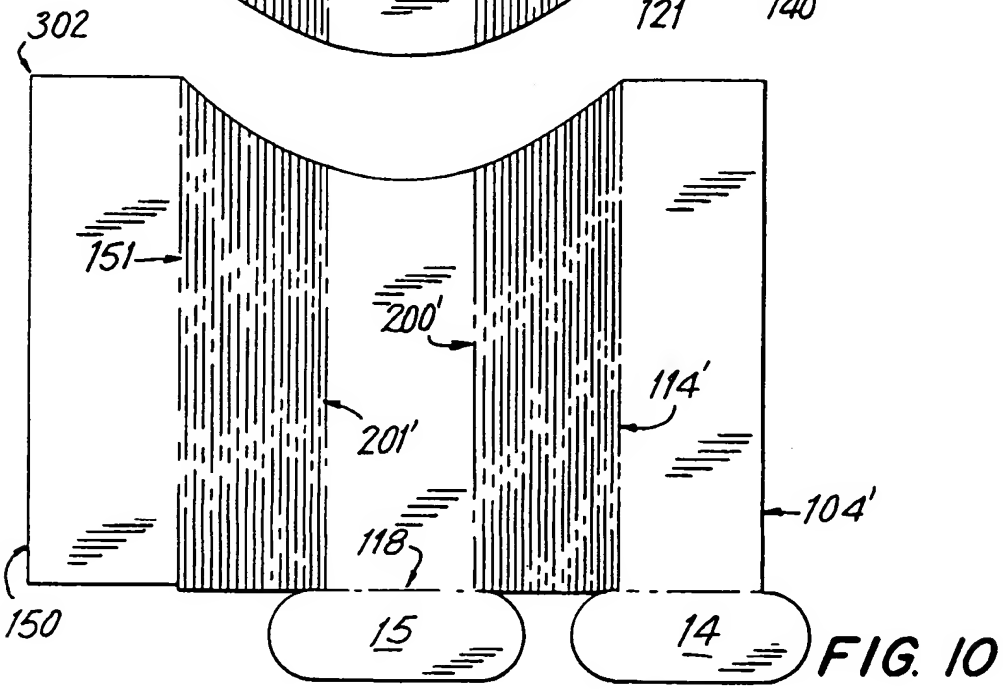

FIG. 10

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 92 31 1078

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
Y	EP-A-0 414 532 (TOBACCO RESEARCH & DEVELOPMENT INSTITUTE) * abstract; figures 1-5 *	1-4, 13-16	B65D85/10 B65D5/02
A		21	
Y	GB-A-590 524 (ROBERTSON PAPER BOX) * the whole document *	1,13	
Y	DE-A-3 116 924 (WILFER) * page 9, line 5 - line 10 * * page 10, last paragraph; figures 1-7 *	2,4,14, 16	
A		5,6,17, 18,21	
D,Y	US-A-4 923 059 (EVERS ET AL) * the whole document *	3,15	
D,A		1,2,4, 9-11,21	
A	DE-U-9 002 504 (A. LANDERER)		TECHNICAL FIELDS SEARCHED (Int. Cl.5) B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
BERLIN	04 FEBRUARY 1993	SPETTEL J.D.M.L.

CATEGORY OF CITED DOCUMENTS

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